CHAPTER 6
OTHER REQUIRED ANALYSES

6.1 INTRODUCTION

In addition to the analyses discussed in chapters 1 through 4, both NEPA and CEQA require additional evaluation of the project's impacts. This chapter and the previous chapter, Cumulative Impacts, satisfy those requirements. These evaluations include identifying and analyzing growth-inducing impacts (CEQA), the relationship between short-term uses and long-term productivity (NEPA), and any irreversible or irretrievable commitment of resources (NEPA) or significant irreversible environmental changes (CEQA).

Issues related to Environmental Justice are presented in accordance with federal Executive Order 12898, 3 CFR 859 (1995),; issues related to protecting children from environmental health risks are presented in accordance with EO 13045, 3 CFR 198 (1998).

6.2 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND LONG-TERM PRODUCTIVITY (NEPA)

NEPA requires that an EIS consider the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity. The project would cause short-term construction impacts, described in Chapter 4, but would result in long-term enhanced ecosystem productivity in Bolinas Lagoon. The project would result in an immediate substantial adverse impact on riparian habitat and wetlands in the project area but would produce substantial long-term benefits to subtidal and intertidal habitat.

6.3 GROWTH-INDUCING IMPACT (CEQA)

An EIS/EIR must include a discussion of the ways in which the proposed action and alternatives could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding area. Analysis of growth-inducing effects includes those characteristics of the action that may encourage and facilitate activities that, either individually or cumulatively, would affect the environment. Population increases, for example, may impose new burdens on existing

community service facilities. Similarly, improving access routes may encourage growth in previously undeveloped areas. While growth itself may not be assumed adverse or beneficial, it may have beneficial, adverse, or significant environmental impacts, depending on its actual impacts on the environmental resources present.

Marin County has established criteria for determining growth-inducing impacts, as follows:

- Would the project extend urban services into a previously unserved area?
- Would the project remove a major obstacle to development and growth?
- Does the project in any way set a precedent for additional growth in the area?
- Would the project induce development to support the uses proposed?

The purpose of the proposed project is to correct one hundred and fifty years of increased sedimentation in Bolinas Lagoon by restoring the lagoon to historic habitat levels. The project would have no discernible impact on economic development or population growth in the surrounding area. Marin County has strictly limited development in west Marin, and there are no elements of either project alternative that are expected to increase development in the project area, to extend urban services into west Marin, to remove obstacles to development, or to set a precedent for additional growth. Any development necessary to support the project (such as traffic management protocols or staging facilities) would be purely short term and would be removed at the conclusion of the project.

6.4 Irreversible and Irretrievable Commitments of Resources

NEPA and CEQA require that an EIS/EIR analyze the extent to which the proposed project's primary and secondary effects would commit nonrenewable resources to uses that future generations would be unable to reverse. Excavation in PGC Delta, Kent Island, Dipsea Road, and the Highway 1 fills would produce a permanent change in those areas. Also, excavation of the North Basin, Main Channel, Bolinas Channel, and South Lagoon Channel would result in permanent changes to the lagoon's hydrology. This excavation would essentially be irreversible.

The project would not require a large commitment of nonrenewable resources, other than the fuels required to power the project machinery, nor would it include highway construction or other improvements that would provide access to a previously inaccessible area.

6.5 Environmental Justice

This section addresses specific topics related to Environmental Justice, as required by NEPA. Specifically, issues related to Environmental Justice are discussed in accordance with EO 12898, and issues related to protecting children from environmental health risks are discussed in accordance with EO 13045.

On February 11, 1994, President Clinton issued EO 12898, entitled Federal Actions to Address Environmental Justice in Minority and Low-Income Populations. This order requires that "each federal agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities, on minority populations and low-income populations" (59 FR 7629 [Section 1-101]). The following studies have been conducted to comply with the order:

- Economic, racial, and demographic information from the 2000 census has been gathered to identify areas of low-income and high minority populations in and around the project area, and
- The alternatives for disproportionate impacts resulting from on-site activities associated with the proposed action have been assessed.

6.5.1 Demographics

The racial breakdown of Marin County, Bolinas, and Stinson Beach is presented in the following tables. Although the Bolinas Lagoon study area no longer includes them, the traditional lands of the newly federally recognized Federated Indians of Graton Rancheria at one time included land within the study area.

As identified in the 1990 census, approximately 85 percent of Marin County was white, 7.8 percent was Hispanic, 3.9 percent was Asian/Pacific Islander, 3.3 percent was black, and 0.28 percent was Native American. Table 6-1 provides a comparison of racial demographic changes within Marin County from 1990 to 1997. Between 1990 and 1997, the total population of Marin County increased by 5.73 percent. Among racial groups, the largest increase, two percent, occurred among Hispanics. The white proportion of the Marin County population decreased during this period by three percent (California Department of Finance 1990, 1997). These statistics are shown in Table 6-2.

Table 6-1
Demographic Changes 1990-1997 for Marin County

	1990	1990 Percent of Total	1997	1997 Percent of Total	Percent Change 1990-1997
White	194,912	85%	198,801	82%	-3.0%
Hispanic	17,930	7.8%	23,958	9.8%	2.0%
Asian/Pacific Islander	9,064	3.9%	11,623	4.7%	0.8%
Black	7,529	3.3%	8,281	3.4%	0.1%
Native American	661	0.28%	611	.25%	-0.03%
Total	**230,096**		**243,274**		

Source: California Department of Finance 1990, 1997

According to the United States Census Bureau, in 2000, approximately 95 percent of Stinson Beach was white, 2.9 percent was "Other" (either uncategorized or two or more races), and less than one percent was Asian, Pacific Islander, black, or Native

American. In 2000, the population of Bolinas was 90 percent white, 5.1 percent "Other," 1.8 percent Asian, 1.8 percent black, 0.4 percent Asian/Pacific Islander, and less than one percent Native American or Pacific Islander (US Census 2002). These statistics are illustrated in tables 6-2 and 6-3.

Table 6-2
Demographic Information for Stinson Beach - 2000

	2000	2000 Percent of Total
White	720	95.9%
Asian	5	0.7%
Pacific Islander	0	0.0%
Black	2	0.3%
Native American	2	0.3%
Other	22	2.9%
Total	**751**	

Source: US Census 2002

Table 6-3
Demographic Information for Bolinas - 2000

	2000	2000 Percent of Total
White	1,128	90.5%
Asian	22	1.8%
Pacific Islander	5	0.4%
Black	23	1.8%
Native American	4	0.3%
Other	64	5.1%
Total	**1,246**	

Source: US Census 2002

6.5.2 Standards of Significance

To determine whether low-income and minority populations could be disproportionately affected by the action alternative or the No Action Alternative, data identified in Chapter 3 was used to identify income and population characteristics of the region.

A project alternative would have a significant impact if it were to potentially affect a community that includes minority or low-income populations and if it were to disproportionately affect the minority or low-income members of the community or tribal resources.

6.5.3 Environmental Justice Analysis

Riparian Alternative

The Riparian Alternative would have no significant effects on minority or low-income populations. While the population in the ROI does include minority and low-income

residents, the impacts of this alternative would not have a disproportionate impact on those members of the community or on tribal resources.

Estuarine Alternative

The Estuarine Alternative would have no significant effects on minority or low-income populations. While the population in the ROI does include minority and low-income residents, the impacts of this alternative would not have a disproportionate impact on those members of the community or on tribal resources.

No Action Alternative

The No Action Alternative would have no significant effects on minority or low-income populations. While the population in the ROI does include minority and low-income residents, this alternative would not have a disproportionate impact on those members of the community or on tribal resources.

6.6 Protection of Children

EO 13045, Protection of Children from Environmental Health Risks and Safety Risks (April 21, 1997), recognizes a growing body of scientific knowledge demonstrating that children may suffer disproportionately from environmental health risks and safety risks. These risks arise because children's bodily systems are not fully developed, because they eat, drink, and breathe more in proportion to their body weight, because their size and weight may diminish protection from standard safety features, and because their behavior patterns may make them more susceptible to accidents. Based on these factors, the president directed each federal agency to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. The president also directed each federal agency to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

To comply with EO 13045, this EIR/EIS included the following actions:

- Identified locations with potentially high concentrations of children, such as schools, day care centers, recreation areas, and residential areas, in areas potentially exposed to project impacts, and
- Assessed activities associated with the proposed project for impacts that would disproportionately affect the health and safety of children.

Marin County has 15 elementary schools, 12 middle schools, and 6 high schools. As of 1997, enrollment for both public and private schools was 35,199, community college enrollment was 16,055, and private college enrollment was 1,686 (California Department of Finance 1999).

The Bolinas-Stinson Union District is an elementary district serving the west Marin communities of Bolinas and Stinson Beach. The district has one school with two separate campuses and covers grades kindergarten through eight. As of September 20,

1999, district enrollment was 176 students (Resta 1999). The Bolinas campus, on Olema-Bolinas Road in Bolinas, serves grades three through eight. The Stinson campus, which is one mile north of Stinson Beach along Highway 1, offers elementary education for kindergarten through grade two (Bolinas School District 1999; Mace 2001).

Riparian Alternative

The Riparian Alternative would have less than significant effects on the health and safety of children. The Stinson Beach School is near the project area on Highway 1. Construction, particularly during the Highway 1 fills excavation, might interfere with school activities. Trucks and other equipment would operate along Highway 1 and would constitute a small potential risk to children's safety during construction. Additionally, road closures near the school during construction might increase the risk of car accidents involving children. These activities are expected to be of limited duration. Construction along Highway 1 would include standard traffic management and public safety protocols to reduce the potential risk to children to a less than significant level.

Estuarine Alternative

The Estuarine Alternative would have less than significant effects on the health and safety of children. The Stinson Beach School is near the project area on Highway 1. Construction, particularly during the Highway 1 Fills excavation, might interfere with school activities. Trucks and other equipment would operate along Highway 1 and would constitute a small potential risk to children's safety during construction. Additionally, road closures near the school during construction might increase the risk of car accidents involving children. These activities are expected to be of limited duration. Construction along Highway 1 would include standard traffic management and public safety protocols to reduce the potential risk to children to a less than significant level.

No Action Alternative

The No Action Alternative would have no impact on the health and safety of children. No project action would be taken, and there would be no increased potential safety risks to children.